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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,232	11/06/2000	Wolfgang Buerger	GT/83	9676

7590 04/13/2005

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EXAMINER

AUSTIN, MELISSA J

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/509,232	BUERGER ET AL.	
	Examiner	Art Unit	
	Melissa Austin	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-34 is/are pending in the application.
- 4a) Of the above claim(s) 21-30 and 32-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31 is/are rejected.
- 7) ☒ Claim(s) 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

This action in response to remarks filed 11 February 2005 and the telephonic interview of 4 April 2005 (see included Interview Summary).

Information Disclosure Statement

1. The Information Disclosure Statement (IDS) filed on 22 March 2000 has been considered by the examiner.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "10" has been used to designate both storage means (Fig. 1) and stack (Fig. 2).
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 70.
4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Objections

6. Claim 31 is objected to because of the following informalities: "sructure" on line 5 of the claim should be changed to "structure". Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (EP 0 718 903) in view of Branca et al. (5,814,405). Kato teaches an electrochemical energy storage device comprising at least two electrodes, an electrolyte, and a porous carrier material (expanded PTFE) for the electrolyte having an inner pore structure in which a perfluorinated surface-active substance is present disposed between the electrodes. (Col. 1, ll. 3-5; Col 3, ll. 11-25, 35-38; Col. 4, ll. 33-47; Col 6, ll. 36-47 [note ion exchange/electrolyte resin is the perfluorocarbon-based ion exchange resin filled in pores]). However, Kato fails to disclose a carrier material inner pore structure consisting essentially of a series of highly elongated nodes with an aspect ratio of 25:1 or greater that are generally aligned in parallel that are interconnected by fibrils. Branca teaches an expanded PTFE (ePTFE) useful in electronic products and as support layers in composite constructions that is much less sensitive to changes in temperature and more uniform than prior art ePTFE. This ePTFE has an internal microstructure consisting essentially of a series of nodes interconnected by fibrils, said nodes generally aligned in parallel, being highly elongated and having an aspect ratio of 25:1 or greater. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the ePTFE as taught by Branca et al. as the carrier material in the electrochemical storage device as taught by Kato et al. because it has a uniform microstructure, is useful in electronic products, and is less sensitive to changes in temperature that may occur in an electrochemical energy storage device.

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9. This rejection may be overcome by disqualifying the Branca et al. reference (5,814,405) under 35 U.S.C. 35 U.S.C. 103(c). This may be accomplished by providing evidence of common ownership or assignment at the time the current invention was made. See MPEP 706.02 (I).

Double Patenting

10. Claim 31 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 15 of U.S. Patent No. 6,613,203 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because both instant claim 31 and conflicting claim 15 patent essentially describe a membrane electrode assembly formed of expanded polytetrafluoroethylene (ePTFE) with a structure including nodes aligned in parallel and interconnected with fibrils, such that the nodes have an aspect ratio of 25:1 or greater. In both the prior art and the instant invention, the nodes are filled with a material permeable to ions. Although the patent claim 15 and instant claim 31 do not use identical language, one of ordinary skill in the art would understand that: "expanded PTFE" recited in the '203 patent is the "carrier material for the electrolyte" recited in instant claim 31, and "electrolytes" and "perfluorinated surface active substances" recited in instant claim 31 encompass the "ion exchange material" required by claim 1 of the '203 patent, which could function as the electrolyte. Additionally, the perfluorinated surface-active agent of the instant invention is capable of ion exchange and can function as an electrolyte.

Response to Arguments

11. Applicant's arguments filed 11 February 2005 have been fully considered but they are not persuasive. Applicant argues that the term "ion exchange material" in claim 15 of U.S. Patent No. 6,613,203 would not suggest the use of "electrolytes" or "perfluorinated surface active substances" as in instant claim 31. Applicant also states that the instant claim 31 is directed to an electrochemical storage means whereas the conflicting claim 15 of U.S. Patent No. 6,613,203 is directed to a fuel cell. "Electrolytes" and "perfluorinated surface active substances" are ion exchange materials, and

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"perfluorinated surface active substances" are known to be used as electrolytes in fuel cells and solid polymer electrolyte cells (see evidence, U.S. Patent No. 5,302,269 Col. 1, ll. 36-53).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Austin whose telephone number is (571) 272-1247. The examiner can normally be reached on Monday - Thursday, alt. Friday, 7:15 AM - 4:15 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mja

Melissa Austin
Patent Examiner
Art Unit 1745


PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER